



THE INSTITUTE OF PAPER CHEMISTRY, APPLETON, WISCONSIN

CONTINUOUS BASE-LINE STUDY (MODIFIED)  
(MILL CORRUGATING MEDIUM DATA FOR APRIL, MAY, JUNE, 1985)

Project 2694-2

Report Sixty  
A Progress Report  
to  
FOURDRINIER KRAFT BOARD GROUP  
OF THE  
AMERICAN PAPER INSTITUTE

September 1, 1985

BASE-LINE  
2nd QUARTER, 1985

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

CONTINUOUS BASE-LINE STUDY (MODIFIED)  
(MILL CORRUGATING MEDIUM DATA FOR APRIL, MAY, JUNE, 1985)

Project 2694-2

Report Sixty

A Progress Report

to

FOURDRINIER KRAFT BOARD GROUP

OF THE

AMERICAN PAPER INSTITUTE

Information contained herein is furnished for your  
internal use only and is not to be disseminated or  
disclosed outside your company or copied or  
otherwise reproduced without the express written  
permission of The Institute of Paper Chemistry

September 1, 1985

## TABLE OF CONTENTS

	Page
SUMMARY	1
INTRODUCTION	2
PRESENTATION OF DATA	2
Presentations (Tables):	
Tables I-II-III-IV. 26-Lb Corrugating Medium, Monthly Averages of Mill Data	3-4-5-6
Table V. Data on Conditioning and Testing Environments	7
APPENDIX. NOTES A, B, C, D, AND E USED IN TABULATION OF MILL DATA	9

# THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

## CONTINUOUS BASE-LINE STUDY (MODIFIED) (MILL CORRUGATING MEDIUM DATA FOR APRIL, MAY, JUNE, 1985)

### SUMMARY OF 26-LB CORRUGATING MEDIUM DATA (MAR-JUN, 1985)

Test	MAR		APR		MAY		JUN		
	Total	Recycled	Total	Recycled	Total	Recycled	Total	Recycled	
Moisture content, %	Max.	9.6	7.4	9.7	7.1	9.7	7.2	9.5	7.1
	Min.	4.3	4.3	4.3	4.3	4.4	4.4	4.3	4.3
	Ave.	6.6(33)	5.9(13)	6.7(34)	5.6(13)	6.6(32)	5.8(13)	6.7(33)	5.9(13)
Adj. basis weight, lb/M sq ft.	Max.	27.6	27.6	27.4	27.4	27.5	27.5	27.1	27.1
	Min.	25.3	25.6	25.2	25.8	25.1	25.9	25.1	25.1
	Ave.	26.4(33)	26.6(13)	26.3(34)	26.5(13)	26.4(32)	26.6(13)	26.3(33)	26.5(13)
Caliper, pt.	Max.	11.4	11.4	11.1	11.1	10.8	10.8	10.9	10.9
	Min.	7.9	7.9	7.9	7.9	8.0	8.0	7.8	7.8
	Ave.	9.6(26)	9.3(12)	9.6(27)	9.4(12)	9.5(26)	9.4(12)	9.5(27)	9.4(12)
Concora, lb	Max.	69.1	69.1	69.2	69.2	69.3	69.3	70.0	69.6
	Min.	51.5	51.5	54.3	54.3	56.5	56.5	54.0	54.0
	Ave.	60.9(33)	59.9(13)	61.4(34)	60.4(13)	61.4(32)	60.9(13)	61.2(33)	60.5(13)
CO Ring Crush, lb	Max.	43.0	40.0	43.0	37.0	41.1	40.0	41.0	38.0
	Min.	24.0	26.0	24.2	24.2	23.2	23.2	23.2	23.2
	Ave.	31.6(25)	31.0( 9)	31.0(25)	30.1( 9)	32.1(25)	30.3( 9)	31.5(26)	29.6( 9)

-----  
Max. and Min. values are current machine averages.  
Ave. value is current F.K.B.G. average, number of machines is indicated in parentheses.

## INTRODUCTION

The continuous base-line study (modified) is a compilation of monthly averages of mill test data obtained routinely on 26-lb corrugating medium manufactured in the member mills of F.K.B.G. Mill data are included for moisture content, basis weight, caliper, Concora, and C.D. Ring Crush made on the production of individual machines which produced at least 500 tons of this grade weight during a given month.

## PRESENTATION OF DATA

For the 26-lb grade weight of corrugating medium referred to earlier, data on conditioning and testing environments, mill test averages for moisture content, adjusted basis weight, caliper, Concora, and C.D. Ring Crush results are compiled in the following tables.

Table Number	Description
I-II-III-IV	Mill Test Averages on 26-Lb Corrugating Medium
V	Data on Conditioning and Testing Environments

The procedure used in calculating cumulative machine averages, machine factors, machine indexes, and F.K.B.G. indexes are described in the Appendix.

It should be explained that the number of machines for which data are compiled in each table for a specified month varies for these reasons: a machine must have (a) produced at least 500 tons of 26-lb corrugating medium during the specified month, or (b) produced 500 tons of 26-lb corrugating medium during any one or more of the 12 months prior to the specified month (so that a cumulative average is available), to be included in a given table.

TABLE I  
AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 26 LB. CORRUGATING MEDIUM  
APRIL, 1985

CODE	MOISTURE CONTENT, PERCENT		ADJ. BASIS WT., LB./M SQ. FT.		CALIPER, PT.		CONCORD TEST LB.	
	MACHINE DATA		MACHINE DATA		MACHINE DATA		MACHINE DATA	
	CUR. AV.	CUM. FACT. %C	CUR. AV.	CUM. FACT. %C	CUR. AV.	CUM. FACT. %C	CUR. AV.	CUM. FACT. %C
A1	7.8	7.8 100.0 118.2	26.0	26.1 99.6 98.5	9.7	9.6 101.0 101.0	61.0	58.2 104.8 100.2
C1	6.5	6.7 97.0 96.5	26.2	26.2 100.0 99.2	9.7	9.6 101.0 101.0	64.0	63.2 101.3 105.1
D1(R)	5.7	5.8 98.3 66.4	26.6	26.6 100.0 100.8	10.5	9.7 108.2 109.4	61.6	60.4 102.0 101.1
I1(R)	5.8	5.8 100.0 87.9	26.8	26.6 100.8 101.5	10.5	10.4 101.0 109.4	61.3	60.9 100.6 100.6
J1	7.2	6.8 105.9 109.1	26.3	26.4 99.6 99.6	8.8	8.7 101.1 91.7	66.0	68.2 99.7 111.6
L1(R)	7.1	7.3 97.3 107.6	26.3	26.3 100.0 99.6			61.0	61.8 96.7 100.2
D1	5.8	6.0 96.7 87.9	26.7	26.8 99.6 101.1			58.0	59.0 98.3 95.2
P1	6.4	6.6 97.0 97.0	26.6	26.4 100.8 101.8	9.4	9.9 94.9 97.9	63.0	63.4 99.4 103.4
Q1	7.5	7.4 101.4 113.6	26.4	26.5 99.6 100.0	10.2	10.2 100.0 106.2	58.0	57.7 100.5 95.2
D2	8.9	8.6 103.5 134.8	25.7	25.9 99.2 97.1	10.8	10.5 102.8 112.5	61.6	61.4 100.3 101.1
F2	7.4	7.3 101.4 112.1	26.4	26.6 99.2 100.0	10.1	10.1 100.0 105.2	57.0	56.9 100.2 93.6
G2(R)	5.6	5.3 105.7 84.8	26.6	26.8 99.2 100.8	7.9	7.8 101.3 82.3	60.1	59.4 101.2 98.7
H2(R)	7.0	7.0 100.0 106.1	26.3	26.4 99.6 99.6	9.3	9.3 100.0 96.9	69.2	69.2 100.0 113.6
K2(R)	5.8	5.8 100.0 87.9	26.3	26.3 100.0 99.6	9.5	9.5 100.0 99.0	62.8	63.9 98.3 103.1
L2	7.6	7.3 106.8 118.2	26.1	26.3 99.2 98.9			62.0	59.8 103.7 101.8
Q2	7.0	7.2 97.2 106.1	26.2	26.1 99.2 98.2	8.5	10.1 84.2 88.5	61.0	61.5 99.2 100.2
R2	6.8	6.8 100.0 103.0	26.8	26.9 99.6 101.5	9.0	9.0 97.8 93.8	63.9	63.9 100.0 104.9
S2	6.9	6.9 100.0 104.5	26.2	26.2 100.0 99.2	9.0	9.2 97.8 93.8	61.0	62.2 98.1 100.2
V2	6.6	6.6 100.0 106.0	26.5	26.4 100.4 103.4	9.0	9.0 100.0 93.8	63.0	61.5 102.4 103.4
V2(R)	4.3	4.4 97.7 65.2	27.4	27.4 100.0 103.8	9.0	9.0 100.0 93.8	55.2	52.0 106.2 90.6
Z2(R)	6.0	6.0 100.0 90.9	26.6	26.6 100.0 103.8	9.0	9.0 100.0 93.8	54.3	51.6 105.2 89.2
A3	7.2	6.3 114.3 109.1	26.1	26.1 100.0 96.9	8.7	8.7 100.0 97.6	69.0	67.0 103.0 113.3
I3(R)	6.0	6.0 100.0 90.9	25.8	26.0 99.2 97.7	6.9	6.8 101.1 92.7	55.0	56.0 98.2 90.3
K3(R)	6.0	6.1 98.4 90.9	26.5	26.6 99.6 100.4	8.8	9.0 97.8 91.7	63.0	63.7 98.9 103.4
L3	6.8	6.8 109.1 72.7	26.1	26.1 100.0 101.9	7.9	7.9 104.4 99.0	58.2	59.6 97.6 95.6
M3(R)	4.8	4.4 109.1 131.8	26.9	26.9 100.0 101.9	9.5	9.1 104.4 99.0	61.0	61.5 99.2 100.2
T3	8.7	8.7 100.0 147.0	25.2	25.3 99.6 95.4	9.7	9.2 105.4 101.0	67.7	64.0 105.8 111.2
W3	9.7	9.6 101.0 147.0	25.2	25.3 99.6 95.4	10.0	10.0 100.0 108.2	61.0	59.8 102.0 100.2
D4	6.9	6.8 101.5 104.5	26.4	26.4 100.0 100.0	9.4	9.8 95.9 97.9	60.4	59.6 101.3 99.2
U4(R)	4.6	4.3 107.0 69.7	26.9	27.0 99.6 101.9	9.2	9.3 98.9 95.8	60.4	59.6 101.3 99.2
P4	6.0	6.0 100.0 90.9	25.9	25.8 100.4 98.1	9.7	9.5 102.1 101.0	60.8	61.0 99.7 99.8
Q4	7.1	7.1 100.0 107.6	26.3	26.4 99.6 99.6	10.7	10.7 100.0 111.4	59.5	59.8 99.5 97.7
H4	7.1	7.2 98.6 107.6	26.1	26.1 100.0 98.9	11.1	11.5 96.5 115.6	61.0	59.2 103.0 100.2
T4(R)	7.0	7.2 97.2 106.1	26.0	26.2 99.2 98.5	10.2	10.0 102.0 106.2	63.8	62.2 102.6 104.8
U4	6.5	6.3 103.2 98.5	26.1	26.2 99.6 98.9	10.2	10.0 102.0 106.2	59.0	59.9 98.5 96.9

FMRG DATA		TOTAL	RECYCLED	TOTAL	RECYCLED	TOTAL	RECYCLED
CUR. AV	6.7	5.8	26.3	26.5	9.6	9.4	61.4
CUM. AV	6.6	5.8	26.4	26.6	9.6	9.4	60.9
IND. #D	101.5	100.0	99.6	99.6	100.0	100.0	100.3

(\*)-- NOTES A, B, C, D, AND E, ARE GIVEN IN APPENDIX.

TABLE II  
AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 26 LB. CORRUGATING MEDIUM

MAY, 1985

CODE	MOISTURE CONTENT, PERCENT			ADJ. BASIS WT.-% LB./ M SQ. FT.			CALIPER, PT.			CONCORA TEST LB.		
	MACHINE DATA			MACHINE DATA			MACHINE DATA			MACHINE DATA		
	CUR. AV.	CUM. AV.	IND. %C	CUR. AV.	CUM. AV.	IND. %C	CUR. AV.	CUM. AV.	IND. %C	CUR. AV.	CUM. AV.	IND. %C
A1	7.4	7.9	93.7	112.1	26.2	26.1	100.4	99.2				
C1	6.6	6.7	98.5	100.0	26.2	26.2	100.0	99.2	9.5	9.6	99.0	99.0
D1(R)	5.7	5.8	98.3	86.4	26.7	26.6	100.4	101.1	10.4	9.8	106.1	102.3
J1(R)	5.8	5.8	100.0	87.9	26.6	26.6	100.0	103.8	10.5	10.5	100.0	109.4
J1	6.8	6.8	100.0	103.0	26.2	27.4	99.2	99.2	8.6	8.7	98.8	89.6
L1(R)	7.2	7.3	98.6	109.1	26.4	26.3	100.4	100.0				
D1	5.8	5.9	98.3	87.9	26.7	26.8	100.0	101.5				
P1	6.5	6.6	98.5	98.5	26.4	26.4	100.0	100.0	9.3	9.9	93.9	96.9
O1	7.4	7.4	100.0	112.1	26.5	26.5	100.0	100.4	10.1	10.2	99.0	105.2
O2	8.5	8.6	98.8	128.8	26.1	25.8	101.2	98.9	10.5	10.6	99.0	109.4
F2	7.3	7.3			26.5				10.0			
G2(R)	5.0	5.3	94.3	75.8	26.8	26.8	100.0	101.5	8.0	7.8	102.6	83.3
H2(R)	6.9	7.0	98.6	104.5	26.4	26.4	100.0	100.0	9.3	9.3	100.0	96.9
K2(R)	5.8	5.8	100.0	67.9	26.3	26.3	100.0	99.6	9.5	9.5	100.0	99.0
L2	7.5	7.3	102.7	113.6	26.8	26.3	101.9	101.5				
G2	7.2	7.2	100.0	109.1	26.2	26.1	100.4	99.2	8.7	9.9	87.9	90.6
R2	6.3	6.8	92.6	95.4	26.7	26.9	99.2	101.1	9.0	9.0	100.0	93.8
S2	7.0	6.9	101.4	106.1	26.2	26.2	100.0	99.2				
V2	6.8	6.6	103.0	103.0	26.5	26.5	100.0	100.4	9.2	9.1	101.1	95.6
Y2(R)	4.9	4.4	111.4	74.2	27.5	27.4	100.4	104.2	9.0	9.0	100.0	93.8
Z2(R)	6.0	6.0	100.0	90.9	26.8	26.6	100.8	101.5	9.0	9.0	100.0	93.8
A3	6.4	6.4			26.1				8.7			
I3(R)	6.0	6.0	100.0	90.9	25.9	25.2	100.0	98.1	8.6	8.8	97.7	89.6
K3(R)	6.0	6.1	98.4	90.9	26.7	26.6	100.4	101.1	8.9	9.0	98.9	92.7
L3	6.8	6.8			26.1				7.9			
M3(R)	4.4	4.4	100.0	66.7	27.0	26.9	100.4	102.3	9.0	9.1	98.9	93.8
T3	8.7	8.7	100.0	131.8	26.0	26.0	100.0	98.5	9.3	9.3	100.0	96.9
W3	9.7	9.6	101.0	147.0	25.1	25.2	99.6	95.1	10.0	10.0	100.0	104.2
D4	7.0	6.8	102.9	106.1	26.1	26.4	98.9	98.9	9.3	9.7	95.9	96.9
O4(R)	5.0	4.3	116.3	75.8	26.8	27.0	99.2	101.5	9.3	9.3	100.0	96.9
P4	5.9	6.0	98.3	89.4	26.1	25.8	101.2	98.9	9.7	9.6	101.0	101.0
Q4	7.0	7.1	98.6	106.1	26.4	26.3	100.4	100.0	10.8	10.7	100.9	112.5
R4	7.0	7.1	98.6	106.1	26.2	26.1	100.4	99.2				
T4(R)	7.1	7.2	98.6	107.6	26.1	26.2	99.6	98.9	10.8	11.5	93.9	112.5
U4	6.3	6.3	100.0	95.4	26.2	26.2	100.0	99.2	10.1	10.0	101.0	105.2

## FKBG DATA

TOTAL			RECYCLED			TOTAL			RECYCLED		
CUR. AV	6.6		5.6			26.4		26.6	9.4		61.4
CUM. AV	6.6		5.8			26.4		26.6	9.4		61.0
IND. %D	100.0		100.0			100.0		100.0	100.0		101.2

(•)--- NOTES A, B, C, D, AND E, ARE GIVEN IN APPENDIX.

TABLE III  
AVERAGES OF ROUTINE MILL QUALITY CONTROL DATA FOR 26 LB. CORRUGATING MEDIUM

JUNE, 1985

CODE #C	MOISTURE CONTENT, PERCENT		ADJ. BASIS WT. % LB./ M SQ. FT.		CALIPER, PT.		CONCORA TEST LB.	
	MACHINE DATA		MACHINE DATA		MACHINE DATA		MACHINE DATA	
	CUR. AV.	FACT. #B	IND. #C	CUR. AV.	FACT. #B	IND. #C	CUR. AV.	FACT. #B
A1	7.6	7.8	97.4	115.2	26.1	26.1	100.0	98.9
C1	6.6	6.7	98.5	103.0	26.2	26.2	100.0	99.2
D1(R)	5.8	5.8	100.0	87.9	26.7	26.6	100.4	101.1
J1(R)	5.6	5.8	100.0	87.9	26.7	26.6	100.4	101.1
J1	7.0	6.7	104.5	106.1	25.7	26.4	97.3	97.3
L1(R)	7.1	7.2	98.6	107.6	26.3	26.3	103.0	99.6
D1	6.9	5.9	116.9	104.5	26.3	26.8	98.1	99.6
P1	6.5	6.6	98.5	98.5	26.3	26.4	99.6	99.6
Q1	7.5	7.4	101.4	113.6	26.4	26.5	99.6	100.0
D2	8.7	8.6	101.2	131.8	25.8	25.8	100.0	97.7
F2	7.5	7.3	102.7	113.6	26.4	26.5	99.6	100.0
G2(R)	5.5	5.2	105.8	83.3	26.6	26.7	99.6	100.8
H2(R)	7.0	7.0	100.0	106.1	26.4	26.4	100.0	100.0
K2(R)	5.9	5.8	101.7	69.4	26.2	26.3	99.6	99.2
L2	7.7	7.3	102.5	116.7	26.3	26.4	99.6	99.6
G2	7.3	7.1	102.8	110.6	26.1	26.2	99.6	98.9
R2	6.3	6.8	92.6	95.4	27.0	26.9	100.4	102.3
S2	5.8	7.0	82.8	87.9	26.9	26.2	102.7	101.9
V2	6.7	6.6	101.5	101.5	26.5	26.5	100.0	100.4
V2(R)	5.1	4.5	113.3	77.3	27.1	27.4	98.9	102.6
Z2(R)	6.0	6.0	100.0	90.9	26.6	26.6	100.0	100.8
A3	6.4	6.4	101.7	92.4	25.1	26.0	96.5	95.1
I3(R)	6.0	6.1	98.4	90.9	26.6	26.6	100.0	100.8
K3(R)	6.0	6.8	97.7	65.2	27.0	26.9	100.4	102.3
M3(R)	4.3	4.4	97.7	65.2	27.0	26.9	100.4	102.3
T3	8.7	8.7	100.0	131.8	26.0	26.0	103.0	98.5
W3	9.5	9.6	99.0	143.9	25.2	25.2	100.0	95.4
D4	6.9	6.8	101.5	104.5	26.3	26.3	100.0	99.6
D4(R)	5.0	4.4	113.6	75.8	26.8	27.0	99.2	101.5
P4	5.8	6.0	96.7	87.9	26.3	25.8	101.9	99.6
Q4	7.2	7.1	101.4	109.1	26.3	26.4	99.6	99.6
R4	6.9	7.1	97.2	104.5	26.3	26.2	100.4	99.6
T4(R)	7.1	7.1	100.0	107.6	26.1	26.2	99.6	98.9
U4	6.2	6.3	98.4	93.9	26.1	26.2	99.6	98.9

FKBG DATA		TOTAL		RECYCLED		TOTAL		RECYCLED		TOTAL		RECYCLED	
CUR. AV	6.7	5.9	26.3	26.5	9.5	9.4	61.2	60.5					
CUM. AV	6.6	5.8	26.4	26.6	9.6	9.4	61.0	60.2					
IND. #D	101.5	101.7	99.6	99.6	99.0	100.0	100.3	100.5					

(\*)-- NOTES A, B, C, D, AND E, ARE GIVEN IN APPENDIX.

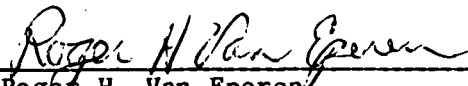


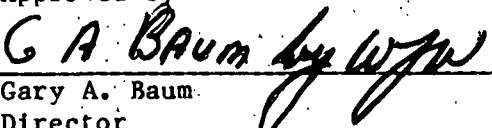


TABLE V  
DATA ON CONDITIONING AND TESTING ENVIRONMENTS  
APRIL, MAY, JUNE, 1985

Code	Conditioning Environment				Testing Environment
	Are Quality Samples Conditioned Before Testing?	Time	Procedure Temp., °F	RH, %	Are Quality Samples Tested Under Controlled Conditions of Temperature & Humidity?
A1	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
C1	No	--	--	--	Yes: 73°F; 50% RH
D1	No	--	--	--	Yes: 72 ± 4°F; 50 ± 5% RH
I1	No	--	--	--	Yes: 72 ± 4°F; 50 ± 5% RH
J1	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
L1	No	--	--	--	Yes: 72 ± 2°F; 50 ± 5% RH
O1	No	--	--	--	No
P1	Yes	20 min	--	--	Yes: 72 ± 2°F; 50 ± 2% RH
Q1	No	--	--	--	Yes: 72 ± 2°F; 50 ± 2% RH
P2	No	--	--	--	Yes: 72 ± 3°F; 50 ± 2% RH
F2	No	--	--	--	Yes: 72 ± 2°F; 50 ± 2% RH
G2	No	--	--	--	Yes: 75 ± 2°F; 50 ± 5% RH
H2	No	--	--	--	Yes: 72 ± 1°F; 50 ± 1% RH
K2	No	--	--	--	Yes: 72 ± 2°F; 50 ± 3% RH
L2	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
Q2	No	--	--	--	Yes: 72 ± 2°F; 50 ± 1% RH
R2	No	--	--	--	No
S2	No	--	--	--	No
V2	No	--	--	--	No
Y2	No	--	--	--	Yes: 73 ± 3°F; 50 ± 2% RH
Z2	No	--	--	--	Yes: 73 ± 3°F; 50 ± 2% RH
A3	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
I3	Yes	20 min	--	--	Yes: 72 ± 3.5°F; 50 ± 2% RH
K3	No	--	--	--	No
L3	No data was submitted for this quarter				
M3	No	--	--	--	No
T3	No	--	--	--	Yes: 70 ± 2°F; 50 ± 10% RH
W3	No	--	--	--	Yes: 72 ± 2°F; 50 ± 2% RH
D4	No	--	--	--	No
O4	No	--	--	--	No
P4	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
Q4	No	--	--	--	Yes: 70 ± 2°F; 50 ± 2% RH
R4	No	--	--	--	Yes: 73 ± 2°F; 50 ± 2% RH
T4	Yes	--	--	--	Yes: 70 ± 2°F; 50 ± 2% RH
U4	No	--	--	--	No

THE INSTITUTE OF PAPER CHEMISTRY

  
\_\_\_\_\_  
Roger H. Van Eperen  
Research Associate  
Paper Materials Division

Approved by  
  
\_\_\_\_\_  
Gary A. Baum  
Director  
Paper Materials Division

## APPENDIX

## NOTES A, B, C, D, AND E, USED IN TABULATIONS OF MILL DATA

Notes A, B, C, D, and E, used in the tables of mill data are given below; these notes define the procedure used in calculating adjusted basis weight, machine factor, machine index, and F.K.B.G. index. It should be stressed that each formula is applicable only to a specific physical property of corrugating medium.

Note A: Adjusted basis weight (ABW) = reported weight (RBW) adjusted to moisture content of 7.8%:

$$ABW = RBW \left[ \frac{(100 - \text{reported moisture content, \%})}{(100 - 7.8)} \right]$$

$$\text{Note B: Machine factor (\%)} = \left[ \frac{\text{Current machine average}}{\text{Cumulative machine average}} \right] \cdot 100 \text{ where}$$

$$\text{Cumulative machine average} = \sum \frac{\text{CMA's}^a \text{ for previous 12 months excluding CMA for current month}}{12}$$

$$\text{Note C: Machine index (\%)} = \left[ \frac{\text{Current machine average}}{\text{Cumulative F.K.B.G. total average}} \right] \cdot 100 \text{ where}$$

$$\text{Cumulative F.K.B.G. average} = \sum \frac{\text{CFKBGA's}^b \text{ for previous 12 months excluding CFKBGA for current month}}{12}$$

$$\text{Note D: F.K.B.G. index (\%)} = \left[ \frac{\text{Current F.K.B.G. average}}{\text{Cumulative F.K.B.G. average}} \right] \cdot 100 \text{ where}$$

$$\text{Current F.K.B.G. average} = \sum \frac{\text{CMA's}^a \text{ for current month for all machines}}{\text{Number of machines}}$$

Note E: (R) - Indicates a medium manufactured from recycled fibers.

<sup>a</sup>CMA = current machine average for a specific physical property of 26-lb corrugating medium obtained during a given month on a specific machine.

<sup>b</sup>CFKBGA = current F.K.B.G. average for a specific physical property of 26-lb corrugating medium obtained during a given month.